



 **Editorial**

Ride the Wave of Success of Natural Products Research!



Professor Rob Verpoorte
Member of the Board of Directors, The GP-TCM Research Association
Editor-in-chief, Journal of Ethnopharmacology.
Natural Products Laboratory, IBL
Leiden University, Leiden
The Netherlands
Verpoort@chem.leidenuniv.nl

Last year was a great year for the natural products research community with a Nobel Prize in Physiology or Medicine given for research in this field. A prize that was given to two different activities: the development of a novel medicine against malaria from traditional Chinese medicine, and for development of an antibiotic by bioprospecting microorganism resulting in an antibiotic that particularly is very useful for treating river blindness, a neglected disease of the poor. Thus in fact the two major ways to come to novel drugs from nature, though with totally different approaches. Both approaches may lead to novel leads for drug development, but studies of traditional medicine has a broader scope, as it may result in evidence-based use of traditional medicines, including recommendations for a safe use. This recognition from the world of western medicine is really encouraging for all of us working in this field, also showing the importance of an international collaboration platform like the GP-TCM RA.

What can we learn from this? First of all, that getting a Nobel Prize takes even longer than developing a novel medicine. Should it take again some 30 years before our efforts in this field will be rewarded with a Nobel Prize again somewhere in the world? With the boost of the recognition of our field we as GP-TCM RA should see how we can ride the wave of success. Our annual meetings are interesting, but is mainly the same group of people that meets, we need to get other people involved in the multidisciplinary research needed to find novel drugs, and novel modes of action. We need to show to other disciplines the value of close collaboration.

One route is education, we should be much more active in educating a new generation of young scientists that have interest in the field of natural products and pharmacology and all related aspects. Certainly we will have PhD students working in relevant projects, but we must also educate a novel generation of young people that have interest to work on the problems of developing novel drugs and evidence based traditional medicines. That means we need also to reach out to the bachelor and master students as they might be the ones working in industry that will produce and sell the products on the market.

We also need to get monodisciplines involved, some 5-7 years ago, pharmacologists did not see anything in looking at mixtures of drugs, all was based on "single target, single compound" approaches for modeling pharmacokinetics and pharmacodynamics. But gradually one can see changes, systems pharmacology and network pharmacology show that there is a clear tendency to go more to the systemic approaches, among others through the experience of successfully treating HIV with a combinations of medicines, the problems with resistance against antibiotics and last but not least with the aging population more and more people consuming a whole battery of different drugs for which little is known about the effect of the combination. Also the principle of personalized medicine well known from traditional medicine does play a role. In the Netherlands the Minister responsible for health care just set aside 12 million Euros for studies on the different effect of medicines in men and women, a first step for a very obvious example of differences in effects of medicines. Of course there is already quite a lot known about differences in the effect that medicines may have in different patients, particularly in connection with drug metabolism where the liver plays an important role, but the more recent acceptance that the GI-tract microbiome plays an important role for our health has opened a whole new area for studies on personalized medicine. Those new insights fit with the statement from some years ago that "*The vast majority of drugs - more than 90 per cent - only work in 30 or 50 per cent of the people*" by

The March-April 2016 Newsletter of
The GP-TCM Research Association
The Easter & Qing-Ming Festival Edition



Allen Roses, Worldwide Vice-President of Genetics at GlaxoSmithKline (GSK) (<http://www.independent.co.uk/news/science/glaxo-chief-our-drugs-do-not-work-on-most-patients-575942.html>, accessed 1-7-2014). Obviously for pharmaceutical companies studies in this field will give mixed feelings, because if you can identify the group that benefits from a drug you will immediately reduce your sales with at least 50%.

Our GP-TCM collaboration could play a leading role in the coming years by encouraging and improving research in the field of traditional medicine and disseminating the results to a broad audience. The Newsletter is an important tool in this, and our editors do a great job to inform a broad audience about what is going on in TCM and related research. Many thanks for that!

To contribute to the further development of our field we are organizing, on behalf of *Journal of Ethnopharmacology* and related journals, a symposium on “Learning from Nature, learning from our Ancestors; from tradition to evidence based medicines”, April 14-15, 2016, in Leiden, The Netherlands. The aim of this symposium is to particularly invite speakers outside our normal circles, and to ask them to speak about the game-changing developments in various disciplines that also may be of interest in our studies on traditional medicines. Systemic approaches using novel model systems like zebrafish and *Caenorhabditis elegans*, applying the omics technologies and how to deal with all enormous amounts of data generated in such studies. Will they be able to take over the role of classical pharmacology? The symposium is particularly meant as a forum to discuss these aspects. It is meant for all those editorial board members and reviewers of journals in the field of traditional medicine and natural products as source of medicines that in the past years helped to improve our research by reviewing papers. Peer review is the best tool in science to improve our research. Setting standards, new methods, what are the limitations the opportunities? Questions we need to look into and where necessary implement novel methods in our work. Such discussions should help to get faster to important results that will benefit the society by evidence based medicinal plants, thus strengthening the primary health care. This includes also novel approaches away from the classical quest for single pure compounds as leads. Instead we should develop novel medications for important diseases, using principles like synergy and personalized medicines through systemic studies of activities. We really are living in an exciting time with many new opportunities, we should take the challenge to go into new directions in close collaboration with all relevant disciplines.

Special Report

**The GP-TCM RA Warmly Congratulate Prof. De-an Guo and Prof. Kuo-Hsiung Lee
For Being Awarded the Third Cheung On Tak International Award
for Outstanding Contribution to Chinese Medicine**



Academician Kuo-Hsiung Lee
Academician of Academia Sinica
Kenan Distinguished Professor of Medicinal Chemistry
Director of Natural Products Research Laboratories
Eshelman School of Pharmacy
University of North Carolina at Chapel Hill



Professor De-an Guo
Chair Professor of Shanghai Institute of Materia Medica,
Chinese Academy of Sciences
Director of National Engineering Laboratory for TCM
Standardization Technology and Shanghai Research
Center for Modernization of TCM

The March-April 2016 Newsletter of
The GP-TCM Research Association
The Easter & Qing-Ming Festival Edition



The Panel of Adjudicators of the Third Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine met on 30 October 2015 to consider the nominees for the Award. After very careful deliberations of their achievements in and contributions to Chinese medicine, the Panel of Adjudicators voted the following two scholars Winners of the Third Award.

<http://scm.hkbu.edu.hk/en/cm-award/third/index.html#awardee>

Awardee Academician Lee: Throughout his research career, Academician Lee has focused on using medicinal chemistry-based methods to investigate Chinese herbal medicines with the aim of discovering and developing new drug candidates and new drugs. This work has made him a world-recognized leader in medicinal and natural products chemistry. With continuing grant support from National Institutes of Health (NIH) and other sources since 1971, his NPRL has studied over 190 Chinese herbal medicines and discovered several thousand novel bioactive natural products and their synthetic analogs, providing leads for new generation drug design against AIDS, cancer, and other diseases. His discoveries will undoubtedly lead to development of future pharmaceutical agents in the same manner that numerous previously discovered bioactive natural products (including ephedrine, taxol, and artemisinin) were developed as current pharmaceutical agents to treat cancers and other diseases. Using the most advanced natural products and synthetic medicinal chemistry coupled with cutting-edge life science technologies, including new computational techniques and new target-based and genomic evaluation methods, the novel lead compounds newly discovered by Academician Lee's research group will provide a solid foundation for developing potential chemotherapeutic drug candidates in the 21st century.

Academician Lee has over 45 years of experience in teaching in the pharmacy profession at graduate levels. In the Division of Medicinal Chemistry and Natural Products (now known as Chemical Biology and Medicinal Chemistry), he has been the graduate advisor of 38 Ph.D. and 7 M.S. graduate students. These students have gone on to gain prestigious appointments in both academia and industry. Academician Lee has also supervised over 190 postdoctoral fellows and visiting scientists. Totally each year, he supervises approximately 20-30 scientists, including graduate students, postdoctoral fellows, visiting scientists and professors.

Academician Lee also coordinates collaborative research projects with more than 60 active scientists/laboratories outside of UNC-CH, which gives his graduate and postgraduate students unique opportunities to interact with experts in numerous biological/mechanistic areas of medicinal and natural product chemistries, in addition to a strong foundation in synthetic medicinal chemistry as well as drug discovery and development that is the major focus of the NPRL.

Academician Lee's productive, internationally known research has resulted in more than 838 research articles and over 113 patents. He has given over 417 invited lectures and presentations, both in and outside of the US. He has also served as an editorial advisory board member of 28 journals, appointed as Chairman of Committee for the Promotion of Chinese Herbal Medicine Industry and Technology, Ministry of Economic Affairs of Taiwan (2000-2006) as well as Member of the Tang Prize in Biopharmaceutical Science Selection Committee of Academia Sinica (2013-2016).

Among Academician Lee's numerous awards and honours are the Lifu Academic Award for Chinese Medicine in 1994; election as Academician of Academia Sinica in 1996; the Outstanding Achievement Award, University of Minnesota in 1999; the Taiwanese-American Foundation Achievement Award in Science and Engineering in 2003; the Kitasato Microbial Chemistry Medal, Japan in 2005; the American Society of Pharmacognosy Norman R. Farnsworth Research Achievement Award in 2009; the Order of the Rising Sun, Gold Rays with Neck Ribbon from the government of Japan in 2011; the China 100 Distinguished Chinese Alumni Award, University of Minnesota in 2014; and the Ernest H. Volwiler Research Achievement Award, American Association of Colleges of Pharmacy in 2015. Academician Lee was elected as Fellow of the American Association of Pharmaceutical Scientists (1986), Fellow of the American Association for the Advancement of Science (1994), and Fellow of the American Society of Pharmacognosy



(2010). He was also appointed as Honorary Professor, Shanghai Institute of Materia Medica, Chinese Academy of Sciences (1996); Honorary Advisor, Chinese Medicinal Material Research Centre, The Chinese University of Hong Kong (1999); Honorary Professor, Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences (1999); as well as Chair Professor and Honorary Director of the Chinese Medicine Research and Development Center at China Medical University and Hospital, Taiwan (2010); and Chair Professor, College of Pharmacy at Kaohsiung Medical University, Taiwan (2011).

Academician Lee feels that medicinal chemistry is an art of combining chemistry and biology for drug discovery and development, and like the Chinese concept of *Yin* and *Yang*, Chemistry and Biology are complementary. The discovery of new bioactive compounds from Chinese herbal medicine depends on valid biological assays and targets, while new chemistry can make the discovery of new biological targets possible. Accordingly, he feels that research on Chinese herbal medicine is one of the most effective and efficient methods to discover new drugs.
http://scm.hkbu.edu.hk/en/cm-award/third/bio_lee.html

Awardee Professor Guo: Professor Guo has focused his research on modernization of TCM for more than 30 years. He has established a method to analyse the active ingredients of TCM and developed a standard system for holistic quality control of TCM, which have been adopted as standards of the Chinese Pharmacopoeia, United States Pharmacopoeia and Europe Pharmacopoeia. These remarkable achievements were considered to have a great global impact and widely recognized through the numerous awards and prizes conferred on him over the years. He won the Third Prize of the Fourth Wu Jieping Medical Research Award and the Paul-Janssen Pharmaceutical Research Award in 1997, and the National Science Fund for Distinguished Young Scholars awarded by the National Natural Science Foundation of China (NSFC) in 1999. He was awarded the Natural Science Award (First Class) by the Ministry of Education of China in 2005 and 2007. In 2012, he received the State National Science Award (Second Class), Outstanding Contribution Award of the 11th Oxford International Conference on the Science of Botanicals as well as American Botanical Council Norman R. Farnsworth Excellence in Botanical Research Award. He received the Wu Jieping Medical Innovation Award in 2013 and the Science and Technology Award (First Class) of the China Association of Chinese Medicine in 2015.

Professor Guo is the first Chinese scientist to introduce TCM standards into the United States Pharmacopoeia and European Pharmacopoeia and has chaired many major scientific research projects at the national level. He published over 350 SCI papers with 5,900 SCI citations. He has 14 authorized patents and compiled 12 books or book chapters. His concurrent academic positions include, among others, President of Good Practice in Traditional Chinese Medicine (GP-TCM) Research Association, Executive Committee member of Chinese Pharmacopoeia, Director of Committee for Natural Medicines, Vice Chair of Botanical Dietary Supplement and Herbal Medicine Expert Committee of United States Pharmacopoeia, Member of European Pharmacopoeia, Chairman of The Specialty Committee of TCM Pharmaceutical Analysis of World Federation of Chinese Medicine Societies (WFCMS), Expert of Panel of Society for Medicinal Plant Research (GA), Expert of Panel of the American Botanical Council (ABC), Member of Drug Evaluation Committee of State Food and Drug Administration (SFDA). He currently serves as Editor-in-Chief, Associate Editor or Editorial Board members of 18 highly respected international scientific journals, including *World Journal of Traditional Chinese Medicine*, *Journal of Ethnopharmacology*, *Planta Medica*, and *Fitoterapia*, etc. He has delivered more than 40 plenary lectures in major international conferences. He initiated and organized the "Shanghai International Conference on Traditional Chinese Medicine and Nature Medicine" meeting series, which has successfully been held 8 times and becomes a well-known international event. He also held six consecutive meetings of the "International Conference on TCM Pharmaceutical Analysis" as its President.

http://scm.hkbu.edu.hk/en/cm-award/third/bio_guo.html



The Awardees' Lectures will be hosted by the Hong Kong Baptist University and will be held on the 8th April 2016. Please download lecture poster and register here:

<http://scm.hkbu.edu.hk/en/cm-award/third/index.html>



The Third Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine Award Ceremony-cum-Award Winners' Lectures

第三屆張安德中醫藥國際貢獻獎 頒獎典禮暨得獎學人講座



Award Winner 得獎學人
Academician Kuo-Hsiung Lee
李國雄院士

- Academician of Academia Sinica
中央研究院院士
- Kenan Distinguished Professor of Medicinal Chemistry and Director of Natural Products Research Laboratories, Eshelman School of Pharmacy, University of North Carolina at Chapel Hill
美國北卡大學藥學院
Kenan 醫藥化學傑出講座教授暨天然藥物研究所所長

Lecture Title 講座題目
Chinese Herbal Medicine and
New Drug Discovery and Development
中草藥與新藥研創



Award Winner 得獎學人
Professor De-an Guo
果德安教授

- Chair Professor of Shanghai Institute of Materia Medica, Chinese Academy of Sciences
中國科學院上海藥物研究所研究員
- Director of National Engineering Laboratory for TCM Standardization Technology
中藥標準化技術國家工程實驗室主任
- Director of Shanghai Research Center for Modernization of Traditional Chinese Medicine
上海中藥現代化研究中心主任

Lecture Title 講座題目
Elaboration of Holistic TCM Quality Standards
and Its Applications
中藥整體質量標準體系構建及其應用

2016 · 4 · 8 | 15:30 - 18:00

Tsang Chan Sik Yue Auditorium (AAB 201), Academic and Administration Building, Baptist University Road Campus, HKBU
香港浸會大學 浸會大學道校園 教學及行政大樓二樓 曾陳式如會堂

Language 語言: Putonghua 普通話
Registered CMP credits 註冊中醫師進修學分: 2
Enquiries 查詢: 3411 2064

Please visit the website below for registration
請於以下網址登記報名
<http://scm.hkbu.edu.hk/cm-award-lectures>





European Reports

1. The European Medicines Agency has recently published for public consultation:

Five draft European Union herbal monographs on:


- Salvia officinalis L., folium:
http://www.ema.europa.eu/ema/doc_index.jsp?curl=pages/includes/document/document_detail.jsp?webContentId=W500201936&murl=menus/document_library/document_library.jsp&mid=0b01ac058009a3dc
- Harpagophytum procumbens DC. and/or Harpagophytum zeheyri Decne., radix:
http://www.ema.europa.eu/ema/doc_index.jsp?curl=pages/includes/document/document_detail.jsp?webContentId=W500201933&murl=menus/document_library/document_library.jsp&mid=0b01ac058009a3dc
- Origanum majorana L., herba:
http://www.ema.europa.eu/ema/doc_index.jsp?curl=pages/includes/document/document_detail.jsp?webContentId=W500201951&murl=menus/document_library/document_library.jsp&mid=0b01ac058009a3dc
- Paeonia lactiflora Pallas, radix (Paeoniae radix alba):
http://www.ema.europa.eu/ema/doc_index.jsp?curl=pages/includes/document/document_detail.jsp?webContentId=W500202009&murl=menus/document_library/document_library.jsp&mid=0b01ac058009a3dc
- Paeonia lactiflora Pall. and Paeonia veitchii Lynch, radix (Paeoniae radix rubra):
http://www.ema.europa.eu/ema/doc_index.jsp?curl=pages/includes/document/document_detail.jsp?webContentId=W500202016&murl=menus/document_library/document_library.jsp&mid=0b01ac058009a3dc

Please, send your comments to hmpc.secretariat@ema.europa.eu by using the standard template:
http://www.ema.europa.eu/docs/en_GB/document_library/Template_or_form/2009/12/WC500017099.doc.


- One call for scientific data for: the systematic review of the monograph on Peumus boldus Molina, folium:
http://www.ema.europa.eu/ema/doc_index.jsp?curl=pages/includes/document/document_detail.jsp?webContentId=W500201953&murl=menus/document_library/document_library.jsp&mid=0b01ac058009a3dc


Please, send your comments to hmpc.secretariat@ema.europa.eu. Further information can be obtained from Nathalie Macle, Stakeholders and Communication Division, European Medicines Agency, 30 Churchill Place, London, E14 5EU, United Kingdom, nathalie.macle@ema.europa.eu

The deadline for comments is 15 May 2016.

 2. Kamoun S, Zipfel C. **Class uncorrected errors as misconduct.** *Nature* 2016;531:173. Post-publication peer review is becoming increasingly popular, but authors need more incentive to self-correct and amend the scientific record (see D. B. Allison *et al.* *Nature* **530**, 27–29; 2016). We propose that failure by authors to correct their mistakes should be classified as scientific misconduct. This policy has already been implemented by our institute, and we encourage research institutions and funding bodies to follow suit (see go.nature.com/dgiff). The responsibility to correct errors lies mainly with the criticized authors. Snubbing criticism by not addressing it promptly runs counter to our fundamental ethos as scientists, and threatens to erode society's trust in the scientific community. The authors are from *The Sainsbury Laboratory, Norwich, UK*. sophien.kamoun@tsl.ac.uk.

China Reports

 1. Qi G, et al. **Reforming China's science awards.** *Science* 2016;351:1161. Youyou Tu won the Nobel Prize, yet she failed to be nominated for China's own State Science and Technology Awards. This has triggered a fierce debate on the S&T Award evaluation system in China...
http://science.sciencemag.org/content/351/6278/1161.1?utm_campaign=email-sci-toc&et rid=33953672&et cid=331862

 2. **China to Consolidate Drug Market, Promote Traditional Medicines** (Reporting by Adam Jourdan; Editing by Miral Fahmy) China plans to consolidate its huge and fragmented drug

**The March-April 2016 Newsletter of
The GP-TCM Research Association
The Easter & Qing-Ming Festival Edition**



market and will support a greater role for traditional Chinese medicines (TCM), the central government said in a statement on Sunday following a meeting of the State Council. China will also strengthen safety controls and traceability of domestic drugs, the statement said, part of an ambitious program of healthcare reforms to improve home-made medicines and reduce reliance on generic and more innovative drugs from overseas.


"Accelerating the development of our domestic drug industry will better serve our people's healthcare needs, help build a healthier China and unleash economic growth potential," the statement posted on the central government website said.

China's near 1.4 billion potential patients are a major lure for drug firms targeting growth driven by rising incomes and a fast-ageing population. Beijing is keen, however, for local firms to take a larger slice of a healthcare bill set to hit 1.3 trillion by 2020.

The statement said China would push to consolidate the fragmented domestic sector: "We will support pharmaceutical mergers and acquisitions and foster industry leaders in order to solve the 'scattered' nature of the market," it added.

Traditional Chinese remedies, used to treat ailments from colds to cancers, will also play a greater role, the statement said. The TCM market, with expensive natural ingredients ranging from deer antler to ginseng, is set to hit \$40 billion by the end of the decade.

"We will raise investment and policy support for TCM," the statement said, adding the government would give greater support to research and development in the area as well as helping push these remedies overseas. <http://www.reuters.com/article/us-china-pharmaceuticals-idUSKCN0VO07S>

 3. Mu Xuequan. **National plan issued to promote traditional Chinese medicine** (Xinhua 2016-02-26 22:28:05). BEIJING, Feb. 26 (Xinhua) -- China will develop traditional Chinese medicine (TCM) into a pillar industry, according to a blueprint released by the State Council, China's Cabinet, on Friday. The plan proposes universal access to TCM care by 2020. By 2030, TCM should make a notably greater contribution to social and economic development.

The plan, calling for equal attention to TCM and Western medicine, set out tasks including "Internet + TCM", integrating TCM with elder care and tourism, protecting the inheritance of knowledge and technology, developing new drugs -- particularly those used in treating major communicable disease and severe illnesses -- and boosting industrialized production of drugs.

The plan proposes changes to the law and standardization, along with teaching TCM basics to primary and middle school students.


Apart from TCM, China also aspires to boost research and development of new drugs with indigenous intellectual property aspects in the 13th Five-year Plan.

China has made rapid progress in this field.

Liu Qian of the National Health and Family Planning Commission said the number of such new drugs developed during the 12th Five-Year Plan period (2011-2015) -- about 20 in total -- tripled those developed in the 50 years before, including the anti-tumor icotinib hydrochloride Chidamide and the inactivated EV71 vaccine against hand-foot-mouth disease.

http://news.xinhuanet.com/english/2016-02/26/c_135135192.htm
<http://english.cri.cn/12394/2016/02/20/3441s917412.htm>

Recommended Readings on Science and Biology

 1. Baker M. **How quality control could save your science.** *Nature* 2016 Jan 28;529:456-8. It may not be sexy, but quality assurance is becoming a crucial part of lab life. http://www.nature.com/news/how-quality-control-could-save-your-science-1.19223?WT.ec_id



- 2. Allison DB *et al.* Reproducibility: A tragedy of errors.** *Nature* 2016 Feb 3;530:27-9. Mistakes in peer-reviewed papers are easy to find but hard to fix, report Allison and colleagues. http://www.nature.com/news/reproducibility-a-tragedy-of-errors-1.19264?WT.ec_id
- 3. Laenen G, *et al.* Galahad: a web server for drug effect analysis from gene expression.** *Nucleic Acids Res.* 2015;43:W208-12. Galahad (<https://galahad.esat.kuleuven.be>) is a web-based application for analysis of drug effects. It provides an intuitive interface to be used by anybody interested in leveraging microarray data to gain insights into the pharmacological effects of a drug, mainly identification of candidate targets, elucidation of mode of action and understanding of off-target effects. The core of Galahad is a network-based analysis method of gene expression. As an input, Galahad takes raw Affymetrix human microarray data from treatment versus control experiments and provides quality control and data exploration tools, as well as computation of differential expression. Alternatively, differential expression values can be uploaded directly. Using these differential expression values, drug target prioritization and both pathway and disease enrichment can be calculated and visualized. Drug target prioritization is based on the integration of the gene expression data with a functional protein association network. The web site is free and open to all and there is no login requirement.
- 4. Evans A, Neuman N. The Mighty Mitochondria.** *Mol Cell* 2016;61(5):641. Mitochondria are mysterious, marvelous little structures. Despite their long evolutionary history before being co-opted as eukaryotic organelles, these endosymbionts have become entrenched in eukaryotic cell function. Originally thought to be merely the “powerhouse of the cell” (as if that were not enough), interest in these organelles resurged after they were implicated in a variety of cellular functions and pathobiologies including cell signaling, metabolism, cell death, aging, and cancer. In two coordinated Special Issues, *Molecular Cell* and *Trends in Biochemical Sciences* celebrate the uniqueness of mitochondria and also highlight ways in which mitochondria integrate within the broader cell. You can find these Special Issues, and more mitochondria-related content, at <http://www.cell.com/molecular-cell/home> <http://www.cell.com/trends/biochemical-sciences/home>. <http://www.cell.com/molecular-cell/fulltext/S1097-2765%2816%2900086-1?elsca1>
- 5. Baker M. Statisticians issue warning over misuse of P values.** *Nature* 2016;531:151. Misuse of the *P* value — a common test for judging the strength of scientific evidence — is contributing to the number of research findings that **cannot be reproduced**, the American Statistical Association (ASA) warns in a **statement** released today (7th March). The group has taken the unusual step of issuing principles to guide use of the *P* value, which it says cannot determine whether a hypothesis is true or whether results are important. This is the first time that the 177-year-old ASA has made explicit recommendations on such a foundational matter in statistics, says executive director Ron Wasserstein. The society’s members had become increasingly concerned that the *P* value was **being misapplied** in ways that cast doubt on statistics generally, he adds. In its statement, the ASA advises researchers to avoid drawing scientific conclusions or making policy decisions based on *P* values alone. Researchers should describe not only the data analyses that produced statistically significant results, the society says, but all statistical tests and choices made in calculations. Otherwise, results may seem falsely robust. http://www.nature.com/news/statisticians-issue-warning-over-misuse-of-p-values-1.19503?WT.ec_id <http://www.amstat.org/newsroom/pressreleases/P-ValueStatement.pdf>
- 6. Bynum B, Bynum H. The herbarium sheet.** *Lancet* 2016;387:1046. Despite the power of synthetic chemistry, medicine still needs the natural products of plants. Plants are important as potential sources of new drugs. In the past they provided the raw materials for therapeutics. Using the correct kind of plant was important, since plants can poison as well as heal. But the species was also important. One common way of recording their identity and establishing permanent preserved specimens was with the herbarium sheet. This simple piece of paper held the dried and pressed plants parts, which could then be labelled with the name and place of origin... [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(16\)00664-4/fulltext?elsca1](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)00664-4/fulltext?elsca1)



TCM and Acupuncture in Spotlight

1. Ten TCM drugs have completed or are undergoing FDA-approved Phase II or III trials.

http://mp.weixin.qq.com/s?__biz=MjM5NzY2MDQwMg==&mid=402060814&idx=1&sn=462982bbebe811c9869e1559e33580d2&scene=5&srcid=0313xjBswk5ilLZMMkQljZm7#rd

2. ISO standards and projects under the direct responsibility of ISO/TC 249 TCM:

- ISO 17217-1:2014, TCM - Ginseng seeds and seedlings - Part 1: Panax ginseng C.A. Meyer:
http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=63485
- ISO 17218:2014, Sterile acupuncture needles for single use:
http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=59443
- ISO 18664:2015, TCM - Determination of heavy metals in herbal medicines used in TCM:
http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=63150
- ISO 18665:2015, TCM - Herbal decoction apparatus:
http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=6315
- ISO 18666:2015, TCM - General requirements of moxibustion devices:
http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=63153

3. MacPherson H, et al. Unanticipated Insights into Biomedicine from the Study of Acupuncture. *J Altern Complement Med.* 2016;22:101-7. Research into acupuncture has had ripple effects beyond the field of acupuncture. This paper identifies five exemplars to illustrate that there is tangible evidence of the way insights gleaned from acupuncture research have informed biomedical research, practice, or policy. The first exemplar documents how early research into acupuncture analgesia has expanded into neuroimaging research, broadening physiologic understanding and treatment of chronic pain. The second describes how the acupuncture needle has become a tool to enhance biomedical knowledge of connective tissue. The third exemplar, which illustrates use of a modified acupuncture needle as a sham device, focuses on emergent understanding of placebo effects and, in turn, on insights into therapeutic encounters in treatments unrelated to acupuncture. The fourth exemplar documents that two medical devices now in widespread use were inspired by acupuncture: transcutaneous electrical nerve stimulators for pain control and anti-nausea wrist bands. The final exemplar describes how pragmatic clinical trial designs applied in acupuncture research have informed current general interest in comparative effectiveness research. In conclusion, these exemplars of unanticipated outcomes of acupuncture research comprise an additional rationale for continued support of basic and clinical research evaluating acupuncture and other under-researched therapies.


<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4761810/pdf/acm.2015.0184.pdf>

4. Zhou J, et al. The effectiveness and safety of acupuncture for patients with Alzheimer disease: a systematic review and meta-analysis of randomized controlled trials. *Medicine (Baltimore).* 2015;94:e933. The use of acupuncture for treating Alzheimer disease (AD) has been increasing in frequency over recent years. As more studies are conducted on the use of acupuncture for treating AD, it is necessary to re-assess the effectiveness and safety of this practice. The objective of this study was to assess the effectiveness and safety of acupuncture for treating AD. Central Register of Controlled Trials (CENTRAL), PubMed, MEDLINE, Embase, PsycINFO, Chinese Biomedicine Literature (CBM), Chinese Medical Current Content (CMCC) and China National Knowledge Infrastructure (CNKI) were searched from their inception to June 2014. Randomized controlled trials (RCTs) with AD treated by acupuncture or by acupuncture combined with 1 kind of drugs were included. Two authors extracted data independently. The continuous data were expressed as mean differences (MD) with 95% confidence intervals (CIs). Weighted MD (WMD) was used instead of standardized MD (SMD) when the same scales were used. Adverse reactions related to acupuncture were also investigated. Ten randomized controlled trials with a total of 585 participants were included in the meta-analysis. The combined results of 6 trials showed that acupuncture was better than drugs at improving scores on the Mini Mental State Examination (MMSE) scale (MD 1.05, 95% CI 0.16-1.93). Evidence from the pooled results of 3 trials showed that acupuncture plus donepezil was more effective than donepezil alone at improving the MMSE scale score (MD 2.37, 95% CI 1.53-3.21). Out of 141 clinical trials, 2 trials



reported the incidence of adverse reactions related to acupuncture. Seven out of 3416 patients had adverse reactions related to acupuncture during or after treatment; the reactions were described as tolerable and not severe. Acupuncture may be more effective than drugs and may enhance the effect of drugs for treating AD in terms of improving cognitive function. Acupuncture may also be more effective than drugs at improving AD patients' ability to carry out their daily lives. Moreover, acupuncture is safe for treating people with AD.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4616366/>

Functional Genomics in Progress

 1. Kleinstiver BP, *et al.* **High-fidelity CRISPR-Cas9 nucleases with no detectable genome-wide off-target effects.** *Nature*. 2016 Jan 28;529:490-5. CRISPR-Cas9 nucleases are widely used for genome editing but can induce unwanted off-target mutations. Existing strategies for reducing genome-wide off-target effects of the widely used *Streptococcus pyogenes* Cas9 (SpCas9) are imperfect, possessing only partial or unproven efficacies and other limitations that constrain their use. Here we describe SpCas9-HF1, a high-fidelity variant harbouring alterations designed to reduce non-specific DNA contacts. SpCas9-HF1 retains on-target activities comparable to wild-type SpCas9 with >85% of single-guide RNAs (sgRNAs) tested in human cells. Notably, with sgRNAs targeted to standard non-repetitive sequences, SpCas9-HF1 rendered all or nearly all off-target events undetectable by genome-wide break capture and targeted sequencing methods. Even for atypical, repetitive target sites, the vast majority of off-target mutations induced by wild-type SpCas9 were not detected with SpCas9-HF1. With its exceptional precision, SpCas9-HF1 provides an alternative to wild-type SpCas9 for research and therapeutic applications. More broadly, our results suggest a general strategy for optimizing genome-wide specificities of other CRISPR-RNA-guided nucleases. <http://www.nature.com/nature/journal/v529/n7587/full/nature16526.html>

Sounding Board: This section is reserved for GP-TCM RA members to express their opinions, share their views and comment on publications in previous issues of the GP-TCM RA Newsletters. All members are sincerely invited to contribute proactively. Please e-mail your Co-Editors Dr Tai-Ping Fan (tpf1000@cam.ac.uk) and Dr Qihe Xu (qihe.xu@kcl.ac.uk).

Future Meetings

 1. **The 5th Annual Meeting of GP-TCM Research Association-cum-Summit on *Compendium of Materia Medica* and Innovative Drug Discovery in Chinese Medicine" will be held in Hong Kong, on 9–10 August 2016.**

Should you need further information about the Meeting-cum-Summit, please email: scm@hkbu.edu.hk or phone +852-34112064. The meeting to be held in Hong Kong will be another occasion for us to gather to exchange the findings and results of our latest work. This significant event is jointly organised by GP-TCM Research Association, School of Chinese Medicine of Hong Kong Baptist University (HKBU), and TCM Chemistry Specialty Committee and TCM Pharmaceutical Analysis Specialty Committee of WFCMS. The School of Chinese Medicine will host the event as a part of the celebrations of the 60th anniversary of HKBU. Prof. Aiping Lu, Dean of the School of Chinese Medicine and a member of the Board of Directors of GP-TCM RA, cordially invite all members and friends of the GP-TCM RA from all around the world to come to the HKBU campus to attend the event.

In particular, the Meeting-cum-Summit aims to achieve the following objectives:

- Promote discussion and implementation of good practice in TCM research and development, high-quality evidence-based research on TCM as well as the integration of Chinese medicine and conventional medicine;
- Revisit the significant contributions made by Li Shizhen, the author of the *Compendium of Materia Medica*, to the development of Chinese medicine and discuss new insights into his work;
- Explore new strategies for and approaches to new drug discovery and the standardization of

**The March-April 2016 Newsletter of
The GP-TCM Research Association
The Easter & Qing-Ming Festival Edition**



Chinese materia medica with a view to contributing to the advancement, modernization and internationalization of Chinese medicine as well as health and well-being.

The Meeting-cum-Summit will be devoted to exploring the latest developments in a number of areas of Chinese medicine, including quality control, pharmacology and toxicology, regulatory matters and standardization, clinical studies, acupuncture, *Compendium of Materia Medica*, new drug discovery strategies and approaches. Please visit <http://scm.hkbu.edu.hk/gptcm-summit> for more information, and check updates from time to time. Please disseminate this message to your colleagues and research students who may be interested. You can find the first announcement here: http://scm.hkbu.edu.hk/en/onlineforms/201608_gptcm/poster_1st_announcement.pdf

2. “Learning from Nature, learning from our Ancestors; from tradition to evidence based medicines” to be held in Leiden, The Netherlands, 14-15 April 2016. The 2015 Nobel Prize for Physiology and Medicine was for natural products and neglected diseases. Half of the prize was for discovering the novel antimalarial drug artemisinin in a traditional Chinese medicine. The other half was for bioprospecting leading to the discovery of antibiotics that can be used to fight river blindness. This is an important recognition of natural products as potential medicines, and fits well with the rapidly increasing number of publications in this field in the past years.

This symposium is particularly meant to set standards for research in this multidisciplinary field by having leading scientists of the monodisciplines speaking about the latest developments in their field so we can learn how these might be used in the natural products research.

One of the most important tools we have to improve our field is the peer review system. Getting feedback from colleagues on our work by reviewing the papers we submit is the way we can improve our research. The symposium will therefore particularly be of interests for all editors, editorial board members and reviewers in the field as they are the ones that guard the quality of the research and spread information about the standards in the research.

As a small token of appreciation of all the work done by reviewers and to help them also to learn more about the latest trends we dedicate this symposium to the reviewers of our journals and offer them a special low registration fee. The venue has a limited number of participants of about 180, that means we have to use the “first come first served” principle.

Present your own work in the Mini-poster-orals session (see website) Registration is possible via this link <https://www.jotform3.leidenuniv.nl/plantmeta/53055111947>
<http://science.leidenuniv.nl/index.php/events/learning-form-nature-learning-from-ancestors/>

3. The 9th International workshop Metabolomics Basics and Applications to Plant Sciences, Leiden, 18-22 April 2016 plantsandmetabolomics@gmail.com www.plantsandmetabolomics.nl

4. The 16th Congress of the International Society of Ethnopharmacology (ISE) will held in Yulin, Guangxi, China, on 16-18 May 2016. The ISE is an international society of researchers dedicated to the interdisciplinary study of the pharmacological activities of traditional medicines. ISE is also committed to preservation and conservation of such practices for future generations.
<http://www.ethnopharmacology.org>

5. The 3rd World Congress of High-Tech Acupuncture and Integrative Medicine, Beijing 20-22 May 2016. <http://www.bitcongress.com/HTA&IM2016/>

6. The 2nd Conference on Ethnomedicine and Traditional Medicine (CETM 2016) will be held from 1-3 June 2016 in Nanjing, China. This Conference will cover issues on Ethnomedicine and Traditional Medicine. It is dedicated to creating a stage for exchanging the latest research results and sharing the advanced research methods. **Paper or abstract submission due 1 Feb. 2016.**
<http://www.engii.org/ws2016/Home.aspx?ID=738>

CETM 2016 will be co-located with the following conferences:

(1) The 2nd Conference on Pharmacovigilance and Drug Safety (CPDS 2016)

www.engii.org/conf/CPDS/2016Jun/

(2) The 2nd Int'l Conference on Pharmacology and Toxicology (ICPT 2016)

www.engii.org/conf/ICPT/2016Jun/



(3) The 2nd Int'l Conference on Reproductive Medicine (ICRM 2016)

www.engji.org/conf/ICRM/2016Jun/

(4) The 2nd Conference on Plastic and Aesthetic Medicine (CPAM 2016)

www.engji.org/conf/CPAM/2016Jun/

(5) The 2nd Conference on Advances in Medical Education (CAME 2016)

www.engji.org/conf/CAME/2016Jun/

7. The 5th International Conference on the Modernization of Traditional Chinese Medicine will be held in Chengdu, China on 7-8 July 2016. For promoting the development of traditional medicine, so as to provide better medical service to people worldwide, Prof. Lu Hua, the President of Teaching Hospital of Chengdu University of Traditional Chinese Medicine (CDUTCM), welcomes you to attend this meeting. This is a very meaningful series of conference which has been successfully co-sponsored three times by the Ministry of Science and Technology, Ministry of Public Health, China Food and Drug Administration, State Administration of Traditional Chinese Medicine, and People's Government of Sichuan Province. Led by Prof. Lu, The Teaching Hospital of CDUTCM is organizing the 4th Panel Forum on topic of "the Development of TCM Healthcare". More information to follow.

8. JNPC 2016 - 64th International Congress (Joint Meeting with ASP, AFERP, JSP, PSE and SIF) and Annual Meeting of GA. 24-28 July 2016, Copenhagen, Denmark. <http://www.jnpc2016.dk/>

9. The 15th Meeting of Consortium for Globalization of Chinese Medicine (CGCM) will be held in Taipei on 22-25 August 2016. The Meeting is going to be organized by Academia Sinica. It provides a platform for regulatory-industrial-academic exchanges and potential research collaborations, on various frontiers of TCM among worldwide CGCM members and guests. You are cordially invited to attend the meeting and submit abstracts. Website: www.tcmmedicine.org

Invitation from Journals

1. Invitation from *World Journal of Traditional Chinese Medicine (WJTCM)*. WJTCM, ISSN 2311-8571, a new peer-reviewed journal (quarterly) launched in 2014, is the official journal of the World Federation of Chinese Medicine Societies (WFCMS) and the GP-TCM RA. **Aim & Scope:** Introduce clinical efficacy and mechanism of TCM to doctors and biomedical researchers around the world, so as to provide new ideas and methods for solving the complicated and difficult cases.

- WJTCM includes reviews and original articles focused on four aspects:
- Modern Research on Chinese Materia Medica: theories of processing, property, and compatibility of Chinese materia medica; safety of Chinese materia medica; active principles and mechanism and efficacy of crude drugs and Chinese compound formulas
- Research on TCM Theory: scientific connotation and biological foundation of TCM basic theories
- TCM clinical Research: disease and syndrome, TCM safety, efficacy evaluation, evidence-based and systematic evaluation
- Acupuncture and Moxibustion: effect mechanism of acupuncture and moxibustion, specificity of acupoint effect, acupoints compatibility, efficacy evaluation of acupuncture and moxibustion.

Submission to the Journal: All the articles can be submitted via ScholarOne: <https://mc03.manuscriptcentral.com/wjtcml>, Detailed information about requirements of manuscript and format can be found in "Instruction&Forms" by the above URL, or by accessing WJTCM home page www.wjtcml.org. All WJTCM articles will be published online via WJTCM website (www.wjtcml.org). PDF articles and electronic/online versions are freely available to global readers.

WJTCM has successfully published 4 issues in 2015. Full-text PDF articles and electronic/online versions are freely available to global readers: www.wjtcml.org

2. China—a call for papers from the *Lancet*: In October, 2016, *The Lancet* will dedicate a weekly issue to health care and research in China—our seventh such themed issue since 2008. While the journal welcome submissions from China throughout the year and across all *Lancet*




titles, the editors invite submissions of high quality research from China, or from research teams working on health in China, for this issue in particular. Submissions are welcome on all aspects of health science including, but not limited to: non-communicable disease control, health policies, and health-care reform in China. [http://dx.doi.org/10.1016/S0140-6736\(15\)01157-5](http://dx.doi.org/10.1016/S0140-6736(15)01157-5)

3. **Cao X, et al. A call for abstracts from China. *Lancet* 2016;386:2377.** ... *The Lancet*–CAMS Health Summit 2016, which will be held on Oct 30–31, 2016. Submissions are invited from across all aspects of health science including, but not limited to: translational medicine, clinical medicine, public health, global health, health policy, the environment and ecological systems and health, medical education, delivery of health services, and health-care reform.

The core of the event will consist of submitted abstracts and posters, and will include keynote presentations from leaders in China as well as from outside China. The peer-reviewed abstracts will be published online and in a conference booklet by *The Lancet*. Work completed outside China can be submitted, but only abstracts relevant to China's health science will be considered. Awards will be given each day for the best oral presentation, the best poster presentation, and the best young investigator...Please submit your abstract as a Word document through *The Lancet's* online submission system no later than 30 April 2016, stating in your covering letter that the submission is in response to this call for abstracts from China. After peer review at *The Lancet* and CAMS, participants will be informed of acceptance of abstracts by 30 July 2016. To submit an abstract go to <http://ees.elsevier.com/thelancet>

4. **Davies J, et al. China Diabetes Society 2016: a call for papers. *Lancet* 2016;386:e59-e60.** Two decades ago, it seemed almost inconceivable that China would be heading towards an epidemic of obesity and type 2 diabetes; HIV/AIDS and other communicable diseases were much greater concerns. Rapid economic growth and investment in health systems have led to growing income, rapidly declining infectious disease rates, and increasing life expectancy. This good news story, however, carries with it the baggage of an increasing burden of obesity and diabetes. In 1994, it was estimated that the prevalence of diabetes was 2·5%. Estimates for 2014 suggest that this prevalence has now risen to between 9·7% and 11·6% and there is no indication that rates are going to decline soon...

For the Chinese Diabetes Society meeting in 2016, the Chinese Diabetes Society, *The Lancet Diabetes & Endocrinology* and *The Lancet* will host a session for researchers to present their findings relating to diabetes and obesity in China. Submissions that are judged to be of high enough quality will be presented either orally or as posters, with abstracts being published in *The Lancet Diabetes & Endocrinology*. Additionally, for studies judged to be of highest quality there is potential for publication as a full Article in one of the journals. [http://dx.doi.org/10.1016/S0140-6736\(15\)01119-8](http://dx.doi.org/10.1016/S0140-6736(15)01119-8)

 5. ***Journal of Zhejiang University-SCIENCE B (Biomedicine & Biotechnology)* invites contributions for a special issue on “Integrative Medicine & Obstetrics and Gynaecology”.** This special issue invites authors to submit original research, review, perspective articles in the fields of Integrative Medicine (IM) or Obstetrics and Gynaecology (OG). Potential topics include, but are not limited to: (1) clinical trial or basic study in IM or OG, (2) methodological advantages and challenges in using qualitative and mixed methods design in IM or OG research, (3) systematic reviews or meta-analysis concerning IM or OG clinical practices, and (4) new scientific development in the fields. All submissions will undergo rigorous international peer review. This issue will be extensively publicized in SpringerLink, Twitter, LinkedIn, WeChat, Blog, etc. to attract worldwide attention.

Journal Introduction: *Journal of Zhejiang University-SCIENCE B (Biomedicine & Biotechnology)* (JZUS-B), started in 2005, is an international peer-reviewed journal co-published by Springer & Zhejiang University Press. JZUS-B aims to present the latest developments and achievements in the broad area of Biomedicine, Biotechnology and Biochemistry, and is indexed by SCI-E (2013 IF is 1.278), MEDLINE/PubMed, PMC, JST, CA, etc. We strive to provide a superior service, including (1) fast international peer review (<2 months) and fast publication after acceptance (<3 months), (2)

**The March-April 2016 Newsletter of
The GP-TCM Research Association
The Easter & Qing-Ming Festival Edition**



accepted article in press online immediately, (3) polishing service by native English speakers and rigorous editing and proof-reading, (4) English highlights and Chinese summaries accessible freely, and (5) innovative techniques: CrossCheck/CrossMark/Funding Data/ORCID/Crossref TDM. Please see our website <http://www.zju.edu.cn/jzus> for more details.

Note: If you would like to submit your excellent papers to *JZUS-B*, please select the Article Type “CIM&OG” in the Editorial Manager system, and then send a short message simultaneously to jzus_lhf@zju.edu.cn, jzus_b@zju.edu.cn, and qufan43@outlook.com, in order for us to collect all of the issue information correctly. We would be very appreciative of your great support.

Guest Editors:

- Dr. Fan QU, Women's Hospital, School of Medicine, Zhejiang University, China
- Professor Nicola ROBINSON, London South Bank University, UK
- Dr. Paul J. HARDIMAN, Institute for Women's Health, University College London, London, UK

Assistant: Fang-fang WANG, MD, PhD, Women's Hospital, School of Medicine, Zhejiang University, China.

Manuscript Guidelines: <http://www.zju.edu.cn/jzus/manuscript.php>

Submission Online: <http://www.editorialmanager.com/zusb>

Submission Deadline: June 30, 2016

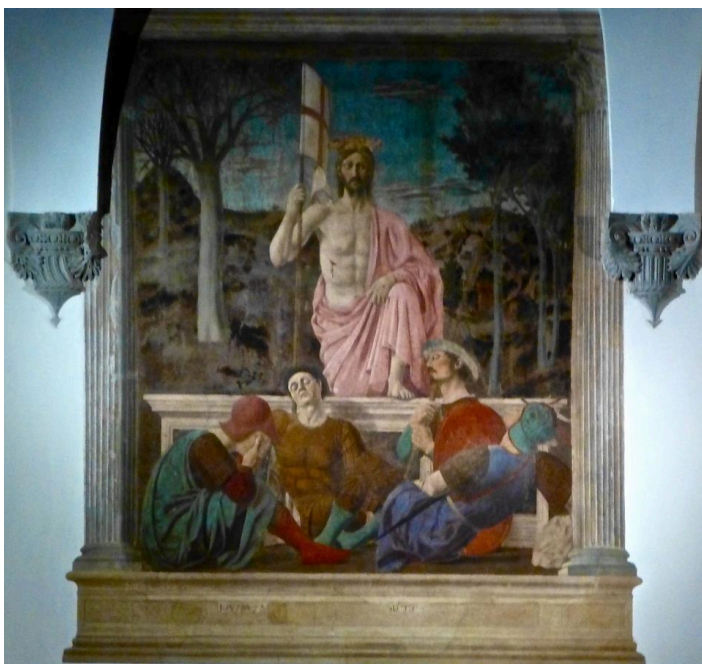
Contact: *Guest Editors:* qufan43@outlook.com and Drwangfangfang@zju.edu.cn; *JZUS-B Editorial Office:* jzus_lhf@zju.edu.cn and jzus_b@zju.edu.cn; Tel: +86-571-87952783.

Acknowledgements

Contributions from Prof. **Rudi Bauer** (Graz), Prof. **Pierre Duez** (Mons), Dr. **Tai-Ping Fan** (Cambridge), Prof. **De-an Guo** (Shanghai), Prof. **Ai-Ping Lu** (Hong Kong), Dr **Fan Qu** (Hangzhou), Prof. **Rob Verpoorte** (Leiden), Ms **Xiaopin Wang** (Beijing), Ms **Hui Xu** (Beijing) and Dr. **Qihe Xu** (London) are gratefully acknowledged.

Easter

Easter, also called Pascha or Resurrection Sunday, is a festival and holiday celebrating the resurrection of Jesus Christ from the dead, described in the New Testament as having occurred on the third day of his burial after his crucifixion by Romans at Calvary c. 30 AD. It is the culmination of the Passion of Christ, preceded by Lent (or Great Lent), a forty-day period of fasting, prayer, and penance.



The Resurrection is a fresco by the Italian Renaissance master Piero della Francesca, painted around 1463-65.

I took this photo at 10:28 PM of 18 March 2013, through the glass entrance of Museo Civico of Sansepolcro in Tuscany, Italy.
[TPF]



Qingming Festival

The Qingming or Ching Ming Festival, also known as Tomb-Sweeping Day in English, is a traditional Chinese festival on the first day of the fifth solar term of the traditional Chinese lunisolar calendar. This makes it the 15th day after the Spring Equinox, either 4 or 5 April in a given year. Other common translations include Chinese Memorial Day and Ancestors' Day.



清明上河圖

A small section of Panorama of *Along the River During the Qingming Festival*, 12th-century original by Zhang Zeduan (1085-1145)

http://www.npm.gov.tw/exh96/orientation/ch_b41_3.html (for the complete art work, and its different versions)

http://www.npm.gov.tw/exh96/orientation/flash_4/index.html (Virtual media area)

https://en.wikipedia.org/wiki/Along_the_River_During_the_Qingming_Festival

